

REMARKS

Claims 1-18 are all the claims pending in the application. Claims 12-18 are withdrawn.

I. Specification - 35 U.S.C. § 112

The Examiner rejected claims 1-11 under 35 U.S.C. § 112, second paragraph.

Applicant respectfully requests the Examiner to withdraw this rejection, in view of the self-explanatory amendments shown above.

II. Prior Art Rejection -35 U.S.C. § 103

The Examiner rejected claims 1-11 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Jeglinski (USP 4,425,777); and further in view of Stegman (USP 3,338,084) or Huang (USP 5,485,664). Applicant respectfully traverses.

A. Rejection Of Claims 1-11

Of the rejected claims, claim 1 is the only independent claim. Claim 1 requires:

A method of manufacturing a chamber formation plate of a liquid ejection head, including a first region formed with at least recess portions to be pressure generating chambers communicated with nozzles from which liquid droplets are ejected by pressure generated in the pressure generating chambers, the method comprising steps of:

...providing at least one deformation absorber, at a second region of the metal plate, between the first region and the reference part; and

performing at least one plastic working by the forging die, with respect to the first region to form at least the recess portions...

In rejecting the claims, the Examiner asserted, "Jeglinski discloses the basic method of manufacturing a liquid ejection head having chambers (funnel shaped regions) and nozzles

communicating with the chambers where the manufacturing includes a forging die 2. See column 3, last full paragraph, in Jeglinski where the plate is formed with a plurality of chambers and corresponding nozzles.” (Office Action, page 2).

The Examiner is associating funnel shaped regions in Jeglinski to “pressure generating chambers” in claim 1. Also, the Examiner asserted that col. 3, last full paragraph, teaches a plurality of chambers. However, col. 3, last paragraph of Jeglinski states: “the ink jet nozzles obtained by means of this press and punch method have very favorable mechanical and physical properties. If more than one jet nozzle it to be punched into the jet nozzle plate 5, jet nozzles can be successively formed by means of the same dies 2...shown in Fig. 1. However, it is alternatively possible to work a plate simultaneously with a number of adjacent arranged dies...”

Col. 3, last full paragraph of Jeglinski does not teach or even mention pressure generating chambers, and the funnel shaped regions are not “pressure generating chambers”, but jet nozzles (col. 3, lines 9-12) for ejecting ink. Moreover, the object of Jeglinski is for “manufacturing...jet nozzles plates where the jet nozzles have accurately defined edges” (col. 1, lines 40-42). Figs. 1-3 of Jeglinski only illustrate how to form jet nozzles for a jet nozzle plate. Jeglinski does not teach or suggest a method of manufacturing a chamber formation plate with pressure generating chambers.

The Examiner cited *In re Beckum*, 169 USPQ 47 contending that “the references [are used for]...the concepts fairly contained therein, and the overriding questions to be determined is whether those concepts would suggest to one skilled in the art the modification called by the claims.” In *In re Beckum* the court held “[w]e think it apparent from the Seanor disclosure that

the concept of ready ignitability is embodied therein. This concept, in our judgment, would have made it obvious to one skilled in the art to substitute compressed wood waste logs for Seanor's bars of wood.” *In re Beckum*, 169 USPQ 49. In *In re Beckum*, the prior art was directed to the exact same thing--fire logs. Therefore under the reasoning of *In re Beckum*, before determining if a concept is similar, the two things being compared must be the same. I.e., first the reference being applied must be for the same item being claimed, and subsequently, an obviousness analysis is performed based on the concepts involved.

Unlike *In re Beckum*, Jeglinski is cited because it broadly involves an element of printing. Jeglinski is directed to a method for making jet nozzles not for making pressure generating chambers as recess portions, and thus *In re Beckum* is of no avail to compensate for the deficiency of Jeglinski.

Regarding the applied references Huang and Stegman, they were applied by the Examiner for their teaching regarding progressive dies. However, they both fail to teach “providing at least one deformation absorber, at a second region of the metal plate, between the first region and the reference part”, where the first region is where the recess portions to be pressure generating chambers are formed. Applicant submits that Stegman and Huang both fail to teach this feature.

As to Stegman, the Examiner seemed to posit that the members 47, 42 and 82 (41) in Fig. 7 of Stegman correspond to the claimed first region, the claimed reference part and the claimed deformation absorber, respectively. However, using the members from Stegman, either the deformation absorber 82 (41) is provided between the adjacent first regions 47 (48, 49) or

between adjacent reference parts 42. (*See* Fig. 7). Nevertheless, Stegman does not teach that the deformation absorber 82 (41) is between the reference part 42 and the first region 47. Therefore, Stegman does not anticipate claim 1.

As to Huang, the Examiner seemed to posit that the members 23, 12 and 11 in Fig. 3 of Huang correspond to the claimed first region, the claimed reference part and the claimed deformation absorber, respectively. However, using the members from Huang, either the deformation absorber 11 is provided between the adjacent first regions 23 or between adjacent reference parts 12. (*See* Fig. 3). Yet, Huang fails to teach that the deformation absorber 11 is provided between the reference part 12 and the first region 23, and thus Huang does not anticipate claim 1.

Since the deformation of the reference part cannot be avoided by the configuration taught in Stegman and Huang, it is impossible to solve the problems discussed in the specification as filed, from page 3, line 16 to page 4, line 1.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Since the claim limitations of claim 1 are not taught or suggested by the combined references, Applicant respectfully requests the Examiner to withdraw this rejection of claim 1 and its dependent claims 2-11.

B. Rejection Of Claim 11

Further regarding the limitations of claim 11, the Examiner contended "...such would be determined through routine manufacturing set ups. This also applies to the limitation of claim 11 where the skilled artisan would select various dimensions based upon desired structural needs in the product." However, the Examiner did not point out in the prior art the limitation of claim 11 that discloses "the interval...[is] 0.3 mm or less."

Applicant submits that such "method of analysis is founded on legal error because it substitutes supposed per se rules for the particularized inquiry required by § 103. It necessarily produces erroneous results." *In re Ochiai*, 71 F.3d 1565, 1570 (Fed. Cir. 1995). In fact, in *In re Ochiai*, the Federal Circuit provided a detailed clarification of what it perceived to be a frequent misunderstanding among Examiners:

The use of per se rules, while undoubtedly less laborious than a searching comparison of the claimed invention -- including all its limitations -- with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. *Per se* rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed, they have been sanctioned by the Board as well. *But reliance on per se rules of obviousness is legally incorrect and must cease.* Any such administrative convenience is simply inconsistent with section 103, which, according to *Graham* and its progeny, entitles an applicant to issuance of an otherwise proper patent *unless the PTO establishes that the invention as claimed in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations.* We once again hold today that our precedents do not establish any per se rules of obviousness, just as those precedents

themselves expressly declined to create such rules. Any conflicts as may be perceived to exist derive from an impermissible effort to extract per se rules from decisions that disavow precisely such extraction.

In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) [emphasis added].

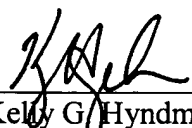
Thus, Applicant submits that the Examiner's method of analysis was legally flawed and contrary to the directive clearly set forth in *In re Ochiai*. Accordingly, Applicant respectfully requests the Examiner to correct this error by considering the cited prior art of record in view of the claim limitations recited in claim 11.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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